THE S. W. SHATTUCK CHEMICAL COMPANY, INC., HAER No. CO-71-E BUILDING NO. 2 (Rhenium Processing Building) 1805 South Bannock Street Denver Denver County Colorado

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record National Park Service Department of the Interior Repky Mountain Regional Office F.O. Box 25287 Denver, Colorado 80225

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Historic American Engineering Record

The S. W. Shattuck Chemical Company, Building No. 2 (Rhenium Processing Building)

HAER No. CO-71-F

Part I. Introduction

Location:

Building No. 2 (Rhenium Processing) of the S. W. Shattuck Chemical Company, Inc. is located at 1805 South Bannock Street in the City and County of Denver, Colorado (Shattuck site). The Shattuck site is located approximately 4 miles south of Denver's downtown area near the intersection of Evans Avenue and Broadway.

Quadrangle:

U. S. Geological Survey, Englewood 7.5-minute topographic quadrangle, dated 1965, photorevised 1980.

Date of Construction:

Building No. 2 was constructed in 1965.

Present Owner:

The S. W. Shattuck Chemical Company, Inc. 1805 South Bannock Street Denver, Colorado 80223

Present Use:

Mineral processing operations at the Shattuck site ceased in April of 1984 due to poor economic conditions associated with molybdenum and rhenium metals. The site is currently undergoing environmental remediation in accordance with the terms of a Superfund Record of Decision issued by the U. S. Environmental Protection Agency ("EPA") on January 28, 1992.

Significance:

The significance of the Shattuck site arises from its role in processing various metals since 1918. At various periods of time, molybdenum compounds, radium, uranium compounds, and rhenium were produced at the site. From about 1934 to the early 1940's, Shattuck was one of only two companies in the U. S. that produced radium salts; although, collectively both companies produced only a small percentage of the radium used in the U. S. during that period.

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Prepared By:

Historic Narrative: Steven F. Mehls, Project Historian, Western Historical Studies, Inc. June 1993

Architectural and Historical Engineering Processes Information: Nanon A. Anderson, AIA, Andrews & Anderson, July and October 1992.

Photography: Arnold Thallheimer, April and May 1992

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Building No. 2

From 1965, when Building No. 2 was constructed, until 1984, Shattuck produced rhenium and some of its compounds. Captured from the vapor phase in the scrubbers outside of Building No. 6, rhenium oxide was dissolved, filtered, and sent to Building No. 2 for processing. There it was extracted and then precipitated as an ammonium perrhenate¹ (See Photographs, HAER No. CO-71-E-1 through 4).

Building No. 2 also housed the shower and locker facility for employees. Although equipment was added to the building throughout its productive life, there were no architectural additions made.

General Description

Building No. 2 is a rectangular, 40' x 75' one-story, brick veneer over concrete block, industrial building. The northeast quadrant of the building has a lowered roof line indicating the shower and locker facilities (See Photographs, HAER No. CO-71-E-1 through 6).

Roof

Both roof sections are flat with composite concrete beams supporting concrete roofing panels with built-up roofing (See Photographs, HAER No. CO-71-E-1 through 4).

Windows

Other than one small awning on the west side, only the shower and locker section has windows: a row of awnings under the eave and paried four-lite awnings next to one of the man doors (See Photographs, HAER No. CO-71-E-2 and 4).

Foundation

The foundation consists of a concrete slab on grade with a perimeter concrete foundation (See Photographs, HAER No. CO-71-E-5 and 6).

Interior Features

The main portion of the building is open and is filled with metal scaffolding, tanks, piping, and extraction cells used in rhenium processing (See Photographs, HAER No. CO-71-E-5 and 6).

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Exterior Features

A series of pipes, approximately 10 feet above grade, channeled feedstock from the scrubbers and steam heat from Building No. 6 to this building. Three stainless-steel tanks, 3 feet, 4 feet, and 5 feet in diameter are positioned outside the north end on a concrete slab. Condensate was piped out of heaters to these tanks, then pumped back to boiler tanks. Fifteen feet to the east of Building No. 2 is an open, steel-framed, fiberglass-roofed shed used for pipe storage and a 15' x 15' metal shed which houses the water deionizer system which removed cations and anions from the city water. The deionized water was then used to make an ammonia hydroxide solution which was added to molybdic oxide to prepare a high-purity ammonia molybdate solution. A 4-foot-high concrete wall attached to the south end of the building forms an oval-shaped enclosure where the rhenium feedstock tank stood (See Photographs, HAER No. CO-71-E1 and 3).

Endnote

- 1. Personal Communication, June 29, 1992, Mr. Henry F. Barry, Vice President Technology, The
- S. W. Shattuck Chemical Company, Inc. with Nanon Adair Anderson, Historic Architect.





